

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER SCHWAB, MARTIN SCHAFER
AND ARTHUR HOHN

Appeal No. 2002-1933
Application 09/331,417

ON BRIEF

Before GARRIS, OWENS and LIEBERMAN, *Administrative Patent Judges*.
OWENS, *Administrative Patent Judge*.

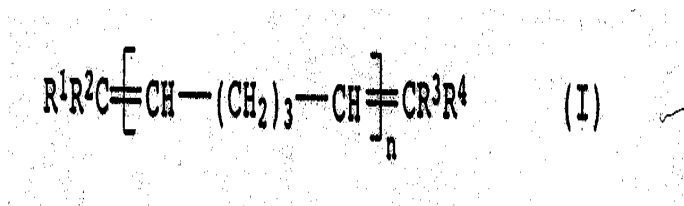
DECISION ON APPEAL

This appeal is from the final rejection of claims 15-28, which are all of the claims remaining in the application.

THE INVENTION

The appellants' claimed invention is directed toward a process for producing a specified oligomer mixture by catalyzed metathesis reaction of cyclopentene and acyclic monoolefins. Claim 15 is illustrative:

15. A process for preparing oligomer mixture of the formula I



which are derived from cyclopentene, where

n is an integer from 1 to 15,

R¹, R², R³, R⁴ independently of one another are hydrogen or alkyl,

which comprises reacting, in a homogeneously or heterogeneously catalyzed metathesis reaction, a hydrocarbon mixture which contains cyclopentene and acyclic monoolefins, originates from petroleum refining by cracking and fractional distillation to produce a C₅ fraction and has a cyclopentene content of at least 5% by weight and wherein the acyclic monoolefins have a penetene isomer content of at least 70% by weight.

THE REFERENCES

Kelly	4,232,180	Nov. 4, 1980
Phillips Petroleum Co. (GB '657) (Great Britain patent specification)	1,163,657	Sep. 10, 1969

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows:
claims 15-19, 22-24 and 26-28 over Kelly in view of the
appellants' admitted prior art, and claims 15-23 and 25-28 over
GB '657 in view of the appellants' admitted prior art.

OPINION

We affirm the aforementioned rejections.

The appellants state that the claims stand or fall together as to each rejection (brief, pages 2-3). We therefore limit our discussion to one claim to which each rejection applies, i.e., claim 15, which is the sole independent claim. See *In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7) (1997).

Claim interpretation

The appellants argue that their claim 15 requires that the C₅ fraction itself is the hydrocarbon mixture, and that the claim excludes the hydrocarbon mixture being a mixture of cyclopentene and acyclic monoolefins which have been isolated from a C₅ fraction (brief, pages 7-8; reply brief, page 3).

The appellants' specification includes "a hydrocarbon mixture termed C₅ fraction" (page 1, lines 10-11) and "the C₅ fraction being subjected to a metathesis reaction" (page 10, lines 33-34). The appellants' claim 15, however, is broader than the embodiment disclosed in the specification. Claim 15 merely requires that the hydrocarbon mixture contains at least 5 wt% cyclopentene, contains acyclic monoolefins having a pentene isomer content of at least 70 wt%, and "originates from petroleum

refining by cracking and fractional distillation to produce a C₅ fraction". The claim does not require that the C₅ fraction is the hydrocarbon mixture. The claim encompasses isolating cyclopentene and acyclic monoolefins from a C₅ fraction and then combining the cyclopentene and acyclic monoolefins to form the hydrocarbon mixture. Interpreting the claim in the more narrow manner argued by the appellants requires reading limitations from the specification into the claim, which is improper. See *In re Prater*, 415 F.2d 1393, 1405, 162 USPQ 541, 551 (CCPA 1969).

Rejections under 35 U.S.C. § 103

Kelly discloses a process for preparing acyclic polyenes, which can be oligomers, by catalyzed metathesis reaction of acyclic α -olefins, such as 1-pentene, with monocycloolefins, such as cyclopentene (col. 1, lines 7-12; col. 1, line 28 - col. 2, line 5).

GB '657 discloses a process for preparing acyclic polyene oligomers by catalyzed metathesis reaction of cyclic olefins, which can be cyclopentene, with acyclic olefins (page 1, lines 44-56; page 2, lines 1-75).

The appellants acknowledge that it was known in the art to steam crack petroleum to produce a C₅ fraction and to isolate cyclopentene and acyclic pentenes therefrom (specification,

page 1, lines 10-30).

The appellants argue that the processes of Kelly and GB '657 do not react a raw C₅ fraction but, rather, require purified monoolefin feeds (brief, pages 8 and 10; reply brief, pages 4-6). This argument is not persuasive because, as discussed above, the appellants' claim 15 does not exclude a process in which the hydrocarbon mixture is a mixture of cyclopentene and acyclic monoolefins which have been isolated from a C₅ fraction.

Accordingly, we conclude that the process claimed in the appellants' claim 15 would have been obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103.

DECISION

The rejections under 35 U.S.C. § 103 of claims 15-19, 22-24 and 26-28 over Kelly in view of the appellants' admitted prior art, and claims 15-23 and 25-28 over GB '657 in view of the appellants' admitted prior art, are affirmed.

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No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136a).

AFFIRMED

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
TERRY J. OWENS)	
Administrative Patent Judge)	APPEALS AND
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PAUL LIEBERMAN)	
Administrative Patent Judge)	

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